

ABSTRACT

An object is to obtain peptides excellent in safety, stability due to relatively low molecular weights thereof, and cell growth promotion, which are different from cell growth factors produced by abnormal cells such as tumor cells. Peptide compositions excellent for promoting cell growth comprising partial peptides of one or more peptide chains selected from peptide chains forming noncrystalline portions constituting silk protein, said partial peptides having specific amino acid sequences formed of four to forty amino acid residues. This invention has succeeded in providing novel peptides excellent for cell growth by separating and fractionating peptides, having specific amino acid sequences of molecular weights not higher than 10,000, preferably ranging from 4,000 to 400, from the noncrystalline portions of silk protein as well as by synthesizing peptides similar to such peptides. These peptides may be used for biomaterials such as cell adhesion agent, cell growth-promoting agent, wound healing promoting agent, skin care material like cosmetic material or the like, and cell culture substrate.